PTE Evaluation

Scope: Construction Project

Equipment: One (1) Empire Abrasive Products Blast Cabinet

Assumptions:

- Nozzle size (5/16") and nozzle pressure is 50 psi
- The capacity from Air Chart 468 lb/hr.
- Shot Emission Factor is approximately 10% of Sand's

Table 13.2.6-1. PARTICULATE EMISSION FACTORS FOR ABRASIVE BLASTING

Source	Particle size	Emission factor (Sand) lb/1,000 lb abrasive	Emission factor (Shot) lb/1,000 lb abrasive
Sand blasting of mild steel panels (SCC 3-09-002-02)	Total PM 5 mph wind speed PM_{10} $PM_{2.5}$	 27 13 1.3	 2.63 1.27 0.13

Source (95% Controlled)	Particle size	Emission factor (Sand) lb/1,000 lb abrasive	Emission factor (Shot) lb/1,000 lb abrasive
Sand blasting of mild steel panels (SCC 3-09-002-02)	Total PM 5 mph wind speed PM_{10} $PM_{2.5}$	 1.35 0.65 0.065	 0.1317 0.0634 0.0063

Shot Blasting Cabinet Uncontrolled:

PM (5 mph):
(468 lb/hr)(2.63 lb/1000 lb)(8760 hr/yr)/(2000 lb/ton) = 5.40 tpy

PM_{10}:
(468 lb/hr)(1.27 lb/1000 lb)(8760 hr/yr)/(2000 lb/ton) = 2.60 tpy

$PM_{2.5}$:
(468 lb/hr)(0.13 lb/1000 lb)(8760 hr/yr)/(2000 lb/ton) = 0.26 tpy

Shot Blasting Cabinet 95% Controlled:

PM (5 mph):
(468 lb/hr)(0.13 lb/1000 lb)(8760 hr/yr)/(2000 lb/ton) = 0.27 tpy

PM_{10}:
(468 lb/hr)(0.06 lb/1000 lb)(8760 hr/yr)/(2000 lb/ton) = 0.13 tpy

$PM_{2.5}$:
(468 lb/hr)(0.01 lb/1000 lb)(8760 hr/yr)/(2000 lb/ton) = 0.01 tpy

Conclusion:
This project is not major for any criteria pollutants.